

ABSTRACT

The invention relates to chimeric molecules comprising a virus coat sequence and a receptor sequence that can interact with each other to form a complex that is capable of binding a co-receptor. Such chimeric molecules therefore exhibit functional properties characteristic of a receptor-coat protein complex and are useful as agents that inhibit virus infection of cells due to occupancy of co-receptor present on the cell, for example. In particular aspects, the chimeric polypeptide includes an immunodeficiency virus envelope polypeptide, such as that of HIV, SIV, FIV, FeLV, FPV and herpes virus. Receptor sequences suitable for use in a chimeric polypeptide include, for example, CCR5 and CXCR4 sequences.